

### REMARKS

Claims 1-12 were presented for examination, are pending and are rejected.

Reconsideration is respectfully requested.

#### The 35 U.S.C. § 103 Rejections

Claims 1-12 are rejected as being unpatentable over Zhang in view of McCullough. The rejection is respectfully traversed.

Zhang does not disclose a quadrature amplitude modulator that does not include a multiplier. The Examiner argues that McCullough teaches a modulator that can function in a variety of modes including quadrature amplitude modulation, and does not disclose the use of any multipliers. The applicants respectfully disagree. As discussed in the attached Declaration Under 37 CFR §1.132, incorporated herein by reference, McCullough teaches a biphase modulator and fails to teach amplitude modulation. McCullough's teachings are only valid for phase-shift keying (PSK) applications, not Quadrature Amplitude Modulation (QAM), which is the subject of Zhang and is claimed in all of the independent claims of the present invention (claims 1, 2, 4, 6-8, 10 and 12). McCullough does not teach a modulator that can function in the QAM mode. One skilled in the art would not incorporate McCullough's modulation technique into Zhang's invention. Therefore the rejection of claims 1, 2, 4, 6-8, 10 and 12 should be withdrawn. The rejection fo

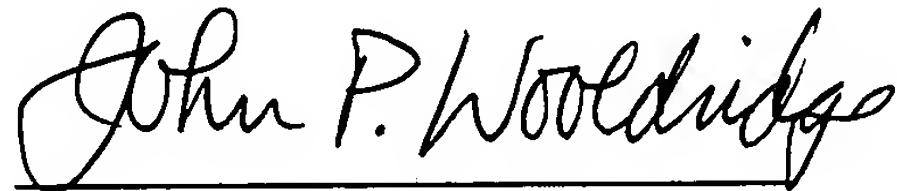
claims 3, 5, 9 and 11 should be withdrawn because they depend from claims 2, 4, 8 and 10, respectively. Therefore the rejection should be withdrawn.

### Conclusions

It is submitted that this application is in condition for allowance based on claims 1-12 in view of the amendments thereto, the attached Declaration and the foregoing comments.

If any impediments remain to prompt allowance of the case, please contact the undersigned at 808-875-0012.

Respectfully submitted,

A handwritten signature in black ink, reading "John P. Wooldridge". The signature is written in a cursive style with a horizontal line underneath the name.

John P. Wooldridge  
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Dated: October 17, 2006